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ABSTRACT

Project ELITES provides bilingual education to 307 Spanish-speaking, Arabic-speaking, and Greek-speaking students at Fort Hamilton High School, Brooklyn, New York. Project ELITES's philosophy is to mainstream students after two years of participation. The program's individualized approach is obtained through a 3-tiered instructional format: gifted, career/occupational, and low literacy. This report evaluates the instructional component, staff development activities, and materials development for 1981-82, the program's second year of operation. Data presented indicate that most of the program's English language objectives were met by participating students. Further, many participants performed well in mathematics, science, and social studies courses. Passing rates in Fall term business and vocational education were lower than the mainstream passing rates for Spanish and Arabic program students, but Greek students had higher passing rates. In the Spring term, passing rates improved for all groups of program participants. The average attendance rate for program students was significantly higher than the mainstream attendance rates. (GC)

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ED234125

O.E.E. Evaluation Report

February, 1983

Grant Number: G00-800-5991

FORT HAMILTON HIGH SCHOOL

PROJECT ELITES: EDUCATION FOR LIFE

THROUGH EXTENDED SERVICES

1981-1982

Principal:
Mr. Diego Coscarelli

Director:
Mr. Robert Diaz

U.S. DEPARTMENT OF EDUCATION
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FORT HAMILTON HIGH SCHOOL

PROJECT ELITES BILINGUAL PROGRAM

Location:	8301 Shore Road, Brooklyn, New York
Year of Operation:	1981-1982, second of two years
Target Languages:	Arabic, Greek, and Spanish
Number of Participants:	307 (57 Arabic, 30 Greek, 220 Spanish)
Principal:	Mr. Diego Coscarelli
Director:	Mr. Robert Diaz

INTRODUCTION

This report focusses mainly on those areas that were singled out for further review in the 1980-81 evaluation report. Therefore, to avoid a duplication of effort, areas that were discussed thoroughly in last year's report are not addressed herein.

Readers interested in information about the geographical location, neighborhood characteristics, other miscellaneous demographic data, and background history on Project ELITES can refer to the 1980-81 evaluation report which provides an extensive overview of the program.

The areas that this report emphasizes, both with regard to description and recommendations, are the instructional component, staff development, and materials development. The information included in this document was gathered in several ways. The evaluation consultant spent three days at Fort Hamilton High School during the months of March and

April. During these visits the program director was interviewed for a span of several hours; interviews were also held with all the resource teachers, bilingual content-area teachers, one E.S.L. teacher, and students participating in the program. A short meeting was also held with the school principal.

Besides interviewing program staff and school personnel, the evaluation consultant visited several classes. Unfortunately the evaluator was not able to observe the E.S.L. classes nor the pull-out instructional component sessions. Therefore, recommendations made on these two aspects of the program are based on information gathered through the interviews with the program director and the teaching staff.

Lastly, in preparation for the on-site visits and writing the report, the evaluation consultant spent considerable time reviewing the school's E.S.E.A. Title VII proposal and the program's 1980-81 evaluation report. This enabled the evaluator, in addition to providing descriptive information on the program, to compare the activities carried out in 1981-82 with both the program's objectives and the previous year's report.

I. STUDENT CHARACTERISTICS

Project ELITES provides bilingual education to 307 students belonging to three language groups. The largest group of students served are Spanish-speaking (220); Arabic-speaking students make up the second largest group (57); and Greek-speaking students are the group with the least number of participants (30).

Of the three groups eligible for bilingual instruction, the Greek students are the most homogenous group, since they are from the same country of origin and share a common language and culture. On the other hand, Arabic- and Spanish-speaking students are quite diverse with regard to several factors such as country of origin (see Table 1), language variations, and educational, cultural, and religious background.

Commenting on the differences in educational achievement between and within language groups, the school principal and program director observed that Greek students, in general, have a strong educational background in their native language, while among Arabic- and Spanish-speaking students it varies according to country of origin as well as whether they come from a rural or urban setting.

Students arriving from countries that have undergone war and political turmoil in the last decade (e.g. Lebanon, El Salvador) are less prepared educationally due to interrupted schooling. Additionally, differences in educational background are particularly evident within the Spanish-speaking group. Students who lived and attended school in metropolitan areas of South and Central American countries and Puerto Rico

are, in general, better prepared than students from the same countries who have had the majority of their schooling in rural areas.

Other differences arise from political orientation and religious background among the Arabic-speaking students. Lebanese students, who make up the majority of the group (28 of 57), are of the Christian and Moslem faiths. Thus, they are divided among themselves according to the political faction with which their families identify. When the school was visited for purposes of this evaluation, friction and hostility between the two groups, other than for isolated incidents, was not considered a major problem.

The following table presents the countries of origin and language groups of all the students in the program.

TABLE 1

Students by Language Group and Country of Origin

(N=307)

Language	Country of Birth	Number	Percent
Spanish	Puerto Rico	109	35.5
	Dominican Republic	33	10.7
	Ecuador	30	9.8
	Panama	12	3.9
	Colombia	5	1.6
	El Salvador	7	2.3
	Guatemala	3	1.0
	Mexico	6	2.0
	Paraguay	2	0.7
	Peru	3	1.0
	Cuba	2	0.7
	Honduras	3	1.0
	Venezuela	1	0.3
	Chile	1	0.3
	Argentina	3	1.0
Greek	Greece	30	9.7
Arabic	Lebanon	28	9.1
	Israel	6	2.0
	Yemen	17	5.5
	Egypt	2	0.7
	Syria	3	1.0
	Other Middle East	1	0.3
	TOTAL	307	100.0

.Compared to the student composition in 1980-81, the total number of students served throughout the year has increased from 256 to 307 students.

.Changes in the percent of Spanish- and Greek-speaking students have taken place between 1980-81 and 1981-82. The percent of Spanish-speaking students in the program has increased from 67 to 72 percent The Greek-speaking population has decreased from 14 to 10 percent. The Arabic student percentage has remained constant at 19 percent.

.None of the students in 1980-81 or 1981-82 are United States-born.

The distribution of students by sex and grade is presented in Table 2. As indicated, most students are concentrated in grades 10 and 11. By sex, it is interesting to note that as grade increases there is a smaller proportion of males, whereas there is an increase in the proportion of females. This condition may be related to family economic conditions and cultural values which require the male of a certain age to contribute to the family's income generation.

TABLE 2

Number and Percentages of Students by Sex and Grade

(N=308)

Grade	Male N	Percent of Grade	Female N	Percent of Grade	Total N	Column Total: Percent of All Students
9	58	76.3	18	23.7	76	24.7
10	46	53.5	40	46.5	86	27.9
11	47	46.5	54	53.5	101	32.8
12	20	44.5	25	55.6	45	14.6
TOTAL	171	55.5	137	44.5	308	100.0

- The largest proportion of students are in grade 11 (32.8 percent), followed by grade 10 (27.9 percent).
- Of the program students, 44.5 percent are females, and 55.5 percent are males.
- The ratio of males to females tends to decrease as grade increases.

Students' diverse life histories, particularly countries of origin and conditions of migration (i.e. political, economic, etc.) make their educational histories quite varied. Many have suffered interrupted schooling or have had very limited educational opportunities. As a result, they have received fewer years of education than their grade level and age would indicate. Tables 3, 3A, 3B, and 3C present students by age and grade, and the number and percent of overage students for their grade. Table 3 presents all program students, 3A presents Spanish-speaking, 3B presents Arabic-speaking, and 3C presents Greek-speaking students.

The high proportion of overage students should be considered in setting standards for performance and expected rates of growth, as well as for interpreting student outcomes. (Note that the percent overage Spanish- or Arabic-speaking students is higher than the percent overage of the total group). Students who have have missed years of schooling, whose grade reflects their age more than their previous preparation, may lack cognitive development in their native language. This deficiency in the native language may be directly related to their ability to acquire oral and literacy skills in English.

TABLE 3

Number of Students by Age and Grade (N=303)

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
13	2				2
14	9	5			14
15	22	19	3		44
16	22	24	31	3	80
17	11	21	30	13	75
18	4	10	25	15	54
19	3	3	11	6	23
20	1	2	1	5	9
21				2	2
Total	74	84	101	44	303

Note. Shaded boxes indicate expected age range for the grade.

Overage for Grade					
Number	41	36	37	13	127
Percent	55.4	42.8	36.6	29.5	41.9

- Of the students in the program, 41.9 percent are overage for their grade.
- The highest proportion of overage students are found in grade 9 (55.4 percent).
- The proportion of overage students decreases as grade increases. This indicates that overage students might be dropping out of the program along the way.

TABLE 3A

Number of Spanish-Speaking Students by Age and Grade (N=222)

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
14	7	3			10
15	17	16	2		35
16	14	19	7	2	62
17	6	18	17	6	47
18	3	9	21	7	40
19	3	2	8	6	19
20		2		5	7
21				2	2
Total	50	69	75	28	222

Note. Shaded boxes indicate expected age range for the grade.

Overage Students					
Number	26	31	29	13	99
Percent	52.0	44.9	38.6	46.4	44.5

.Forty-five percent of the Spanish-speaking students are overage for their grade. The proportions of overage students range from 38.6 percent in grade 11 to 52 percent in grade 9.

.Most students are 16 years of age. Most of these are in grade 10.

TABLE 3B

Number of Arabic-Speaking Students by Age and Grade (N=52)

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
13	1				1
14	1	1			2
15	4	1	1		6
16	8	4	1	1	14
17	5	2	5	2	14
18	1	1	3	5	10
19		1	2		3
20	1		1		2
Total	21	10	13	8	52

Note. Shaded boxes indicate expected age range for the grade.

Overage Students					
Number	15	4	6		25
Percent	71.4	40.0	46.1		48.0

.Forty-eight percent of the Arabic-speaking students are overage for their grade. The proportions of overage students range from 0.0 percent in grade 12 to 71.4 percent in grade 9.

.The highest percent of overage students following grade 9 is grade 11 (46.1 percent).

.Most students are 16 and 17 years of age. These are mostly in grade 9.

TABLE 3C

Number of Greek-Speaking Students by Age and Grade (N=29)

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
13	1				1
14	1	1			2
15	1	2			3
16		1	3		4
17		1	8	5	14
18			1	3	4
19			1		1
Total	3	5	13	8	29

Note. Shaded boxes indicate expected age range for the grade.

Overage Students					
Number		1	2		3
Percent		20.0	15.3		10.3

.Only 10 percent of the students are overage for their grade.

.Overage students are found only in grade 10 (20 percent) and 11 (15.3 percent).

.Most students are 17 years of age. These are mostly in grade 11.

PARTICIPANT SELECTION

Students whose native language is not English make up approximately 31 percent of the total student population of Fort Hamilton High School. Besides the students from the three target language groups, there is a large group of Chinese- (99), Korean- (32), and Vietnamese- (24) speaking students, and a handful (4) of students from European countries. These students do not receive bilingual instruction.

When students first enter Fort Hamilton, they are administered a series of tests to determine eligibility for participation in bilingual classes (if they belong to one of the language target groups funded under E.S.E.A. Title VII) and in English as a second language (E.S.L.) classes. All limited English proficiency students are eligible for E.S.L. instruction.

All students are tested with the English form of the Language Assessment Battery (LAB) and the Criterion Referenced English Syntax Test (CREST). Spanish-speaking students are also administered the Spanish form of the LAB. Since no standardized diagnostic test is available, reading and writing skills in Greek and Arabic are assessed by the two resource teachers who are fluent in the two languages.

All students are interviewed by the program director who is fluent in Spanish; when the interview is with a student belonging to one of the other two language groups, a resource teacher or paraprofessional serves as interpreter.

The purpose of the interviews is to elicit information not revealed by test scores alone, such as the students' educational history,

the circumstances under which they are in this country, as well as their general interests. By eliciting this type of information, the program director is able to prepare program plans that match the students' interests and goals. Based on these interviews, students from the three language groups are placed in one of the program's three instructional components: enrichment for the gifted student, career and occupational for the vocationally-inclined student, and low-literacy for the student who is deficient in basic communication and computational skills.

Students who are of limited English proficiency but do not belong to one of the target language groups are also interviewed by the program director. This practice is particularly advantageous to the Asian students, who previously were often misplaced in remedial classes when interviewed by school personnel not knowledgeable of educational differences among foreign countries. The superior background these students have in mathematics was often overlooked. According to the program director, Asian students, for the most part, are ready for placement in highly advanced mathematics courses.

Although the site visits to this program did not take place until quite late in the school year, the evaluator had the opportunity of observing two interviews the program director held with Yemenite students. Both students were enrolled in other schools but expressed a desire to transfer to Fort Hamilton because they had heard about the bilingual program from friends and other family members. Another reason for these students seeking a transfer to Fort Hamilton, even though it means a long commute, is that Arabic-speaking students are more readily accepted by the school's student body.

TThe program director is well aware that Arabic students see the school as a "safe place," and goes out of his way to make them feel welcome and accommodate their particular needs.

The table below provides the number and percent of students by language group who qualify for participation in the E.S.E.A. Title VII program.

TABLE 4

Students of Limited English Proficiency Eligible to Participate in Project ELITES by Language Group[a]

Language Group	Number of Students Schoolwide	Number Eligible for Participation	Percent of Language Group
Spanish	582	156	26.8
Arabic	134	51	38.1
Greek	153	34	22.2

[a]Asian and European students who may be of limited English proficiency are not included since they do not participate in the bilingual program.

.Arabic students, although they comprise the smallest group of students from a foreign country, have proportionately the greatest need for bilingual education services.

LINGUISTIC CHARACTERISTICS

Students from the three language groups differ both with regard to literacy in their native language, and the length of time it takes to acquire language skills in English and use them in the classroom.

Among the Greek students, illiteracy in their own language is non-existent. Only a minority of the Hispanic students are illiterate in Spanish, but among the Arabic-speaking students illiteracy in the native language is the rule rather than the exception. This is believed to be one of the outcomes of educational systems disrupted by the social and political unrest that besets countries like Yemen, Syria, Jordan, and Lebanon. Another reason for the high illiteracy rate among Arabic students is that many of the students are from nomadic families -- a lifestyle that is not conducive to continuous or stable schooling.

Differences in the students' adaptation to the English language, by language group, are not necessarily a function of ability. Instead, they may be attributed to how students are willing to experiment with the new language and risk making mistakes that may call attention to their "foreigness." Moreover, it is felt that students who are highly motivated to go on to higher education, especially those who would have been deprived of the opportunity in their countries of origin, are more likely to learn English faster and use it more readily.

Greek students, for instance, are reported to be very determined to pursue a college education; according to the principal they are "over-enthusiastic" about being mainstreamed, and thus learn English quickly and use it unabashedly. Indeed, a Greek student, who had arrived in the United States less than a year ago, was able to respond to all questions posed by the evaluator in fairly good and clear English. The student did however mention that he had studied English for five years in Greece.

Students from the Middle East are also felt to be highly motivated to learn English as quickly as possible. These students are in a hurry to get jobs, even if it may mean dropping out of school. They pick up speaking skills very fast, but many do not learn how to read and write English (nor Arabic in the case of many). In speaking about these students, the program director stated, "we have to reeducate them to place more value in education and be more future oriented."

According to the director, Hispanic students are by and large "ashamed" to speak in English. Asked a question in English, they will usually try to respond in Spanish. Hispanic students also choose which language to use according to the situation. When they have a serious matter to discuss, Spanish is used; if on the other hand, the subject is less critical, they may be more willing to use English.

Besides the reasons offered above as to why there may be differences in the use of English among the three language groups, other factors may be the length of time particular ethnic groups have been established in this country coupled with family influence. Greeks, for instance, compared to families from Middle East countries, have deeper roots in this country, and are a particularly strong presence in the community surrounding Fort Hamilton. Greek families envision upward mobility for their children through education. For the Arabic-speaking students who are recent arrivals, upward mobility may be seen more attainable through employment in small family-owned businesses while further education may be considered a luxury beneficial to the individual but not necessarily to the whole family. Greek students thus, learn English to qualify for admission to college; Arabic-speaking students learn it to prosper in the marketplace.

Hispanics, unlike the other two groups, are the most visible ethnolinguistic minority group in New York City. They often live and work in areas where English, rather than Spanish, is the foreign language. For students who do not intend to pursue further education after high school, learning and using English may be less urgent than for the other two groups, especially if knowledge of English is not a criterion for employment.

Table 5 presents post-high school plans of grade 12 students by language group. The table indicates that, whereas most Spanish- and Arabic-speaking students plan to attend college after high school, the majority of Greek-speaking students plans to find a job. These data somewhat contradict the staff's impressions of students' plans, and may be accounted for in part by the fact that data were supplied for 36 out of 44 students. Because the number of responses in each category is small, the impact of the missing cases on the resulting patterns might be noticeable.

TABLE 5

Post-High School Plans of Twelfth-Grade Students by Language Spoken

Plans	Spanish N	Spanish %	Arabic N	Arabic %	Greek N	Greek %	Total N	Total %
College	15	71.4	5	71.4	1	12.5	21	58.3
Job	3	14.3	1	14.3	6	75.0	10	27.8
Keep a Household	1	4.8					1	2.8
Undecided	2	9.5	1	14.3	1	12.5	4	11.1
Other								
Total	21	100.0	7	100.0	8	100.0	36	100.0

.Fifty-eight percent of the grade 12 program students reported plans to go to college, 27.8 had job plans, almost 3 percent had plans to keep a household, and 11.1 percent were undecided.

.An equal proportion of Spanish- and Arabic-speaking students reported plans to go to college (71.4 percent) and to work (14.3 percent). However, Greek-speaking students reported plans to work at a higher proportion (75 percent) and plans to go to college or undecided in low proportions (12.5 percent).

II. PROGRAM DESCRIPTION

PROGRAM PHILOSPHY

The philosophy of Project ELITES, as stated by the school principal and program director, is to mainstream students after two years of participation. Neither the principal nor the program director believe that it would be fair to the students to remain in the program for more than two years. If they are not proficient in English, it is felt that they would have difficulty in realizing plans for further education after graduating from high school. Approximately 70 to 80 percent of the students aspire to a higher education.

The program's philosophy is implemented through an individualized approach that takes into account the varying abilities, competencies, interests, and future aspirations of the students. The individualized approach is obtained through a three-tiered instructional program, each having a distinctive curricular emphasis: gifted, career and occupational, and low literacy. By having these three distinctive instructional components, the program aims to reach all students -- the exceptionally motivated student with a strong academic background, the student who can be educationally motivated by combining learning with applied experience, and the student in need of remedial and developmental work in basic communication and computational skills.

ORGANIZATION AND STRUCTURE

The bilingual program is a self-contained instructional program although it does not have departmental status. It is under the general supervision of the assistant principal for social studies, who also assumed

this position in an acting capacity in February. He replaced the assistant principal for foreign language, arts, and music who had also served as project director until her retirement. Day to day coordination of the program is now the responsibility of the coordinator of educational guidance who since February 1982 has functioned as acting project director.

The acting project director has been associated with Project ELITES since its inception, working as coordinator under the assistant principal for foreign language/project director. He has been at Fort Hamilton for the last fifteen years. Among the other positions he has held during his fifteen-year tenure are language teacher and dean of discipline.

Three bilingual resource teachers are responsible for two major aspects of the program: pull-out instructional services and curriculum development. The resource teachers spend from three to four periods a day in activities related to the pull-out instructional component; the rest of the day is spend on providing individual tutoring, counseling students, contacting parents, and translating materials. Because of the nature of the pull-out program, resource teachers work closely with mainstream teachers.

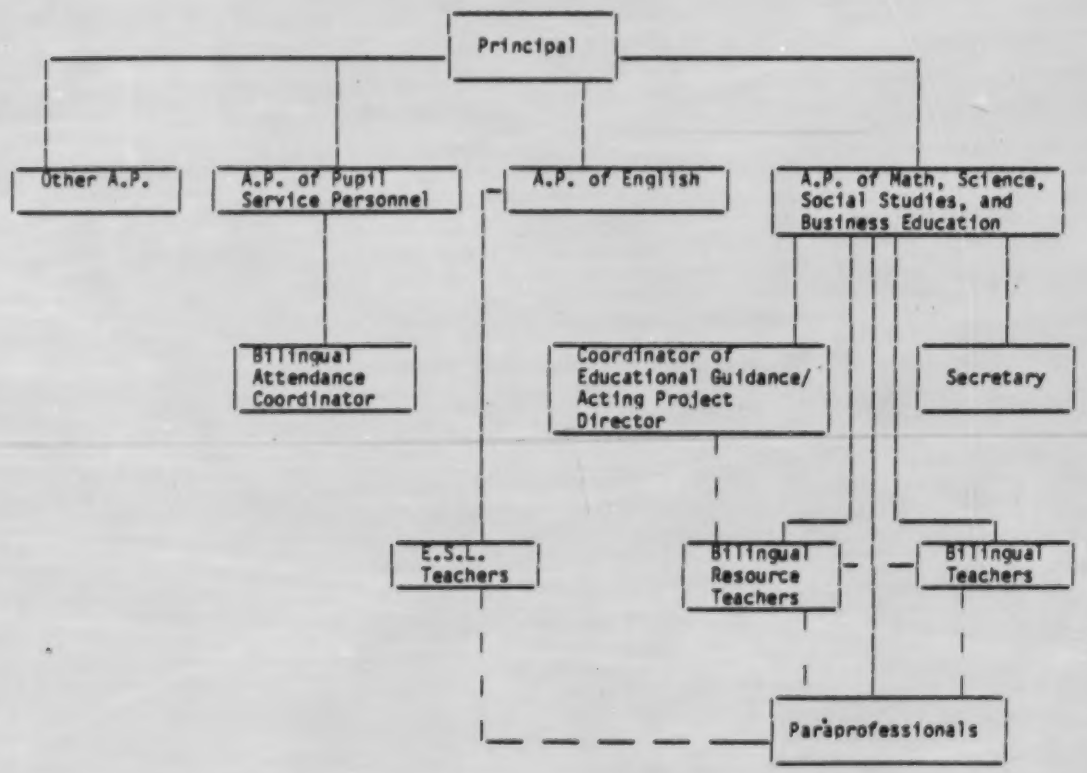
The program also employs three paraprofessionals, each proficient in one of the three target languages. The paraprofessionals spend most of their time tutoring individual students, acting as interpreters, and performing tasks related to the testing program. Paraprofessionals are assigned to assist the bilingual resource teachers as well as the tax-levy teachers within the classroom context when the need arises.

Although the retirement of the assistant principal/project director who was responsible for conceptualizing Project ELITES has left the program understaffed, this change does not appear to have affected the quality of services delivered nor required that major changes be undertaken.

Figure 1 illustrates the program's organizational arrangement within the Fort Hamilton administrative structure.

Figure 1

Organizational Chart of Project ELITES, Fort Hamilton High School



III. INSTRUCTIONAL COMPONENT

STUDENT PLACEMENT, PROGRAMMING, MAINSTREAMING

Programming

Term program plans are prepared by the program director for all students in the program; he also prepares the programs of students of limited English proficiency who are not participating in Project ELITES.

Based on the students' interests, test scores, and teacher recommendations, an individualized program plan is prepared for all students. The program director selects the classes that are required for graduation and the students choose their elective classes.

In general, student programs are fairly uniform by grade, however, some classes (e.g. bilingual history) contain students of lower and upper grades.

Students can be placed according to their interests and abilities into one of the three instructional components:

Gifted. This component is for students who plan to pursue a college education. Students enroll mostly in mainstream courses that are college preparatory (e.g. chemistry, trigonometry). The resource teachers work with the classroom teachers through a pull-out procedure whereby students from the bilingual program are provided with additional assistance in the content area in their native language. The resource teachers will translate into the native language the materials covered in English in the classroom. When tests are given the resource teachers will translate them if necessary so the students have the option of being tested in their native language.

Career and Occupational. This option combines courses that are career oriented with field internships. Students who are placed in this component choose a major career concentration and take mainstream courses related to it (e.g. health, secretarial studies).

Low Literacy. Students in need of developmental work in basic communication and computational skills in their native language, as well as in English, are placed in this component. This component has as one of its objectives improving the students' basic skills to a level high enough to permit them to transfer to the career and occupational component.

Table 6 presents the distribution of bilingual program students by instructional component and language group.

TABLE 6

Number of Program Students by Curriculum Component and Language Group (N=218)

Instructional Component	Spanish	Greek	Arabic	Total N	Percent of Students
Gifted	50	10	14	74	33.9
Career and Occupational	56	9	12	77	35.3
Low Literacy	51	5	11	67	30.7

.Compared to last year's findings, significant changes have taken place in the distribution of students by instructional component. Whereas last year 71 percent of the students were enrolled in the career and occupational component, this year the enrollment has decreased to 35.3 percent. The gifted component increased from 12 percent last year to 33.9; and increases have also taken place in the low literacy component, from 17 percent last year to 33.9.

.Compared to last year, enrollment in the three components is roughly equal.

A possible explanation as to why the distribution of students between instructional components has shifted so greatly since last year may be found in the procedures followed when preparing a student's program of study. It must be noted that although students are classified as belonging to one of the three instructional components, they are nonetheless able to mix courses associated with the other components. Thus, a student in the gifted program can have some courses that are considered career and occupational and vice-versa. While the programming procedures used allow maximum flexibility in the individualization of student programs, the differentiation

between the instructional components loses some of its sharpness. This factor, however, should not affect the intent nor the aims of the components. Among the three components, the gifted and career and occupational are the least differentiated because the classes associated with either one are easily interchangeable.

The English-language instruction courses students take are: English as a second language (E.S.L.) levels I and II, English vestibule (a transition course for the student moving from E.S.L. to mainstream English instruction), English reading and writing, or mainstream English. Students may also take some of their content-area courses in English; the number of mainstream courses taken varies by language group. For Greek and Hispanic students, courses in native-language enrichment are also available. Students from the bilingual program are integrated with mainstream students in physical and health education, art, and music.

The only variation in scheduling is for those students who are involved in an apprenticeship; these students leave school two hours early and report to their field placement. A total of 17 students participated in the apprenticeship program during 1981-82; five students in the first school term and twelve in the second. The field site placements included a police precinct, a real estate office, banks, and hospitals.

Usually only juniors and seniors are eligible to participate in the apprenticeship program. One of the difficulties encountered with the program is that not enough staff is available to supervise the field sites to insure that the tasks students are assigned extend beyond menial work and are of educational value. The program director is aware of this short-

coming and frequently requests from the students a description of the work they are doing. During the first term, for instance, he found that students placed at a hospital were doing what he described as "go-for" work. As a result he has discontinued placement at that site.

Transition

The aim of the program is to mainstream students after having participated for two years. The decision to mainstream students is a joint one, made by the program director, students, and parents. Determining a student's readiness for mainstreaming is based on test scores (above the twentieth percentile on the LAB) and teacher recommendations.

With few exceptions, the majority of parents are eager to have their children mainstreamed and pose no objections to signing the required release form. According to the program director, among the three language groups, the Greeks are "anxious" to be mainstreamed; the Arabic students are "willing"; and the Hispanic students are a "mixed bag." The Hispanic students, for the most part, are reluctant to be mainstreamed; they like being in the program and are not in a hurry to leave their friends nor the teachers to whom they have become accustomed.

Mainstreaming is implemented gradually by combining bilingual with mainstream classes in students' program plans. During 1981-81 approximately 60 percent of the students were taking two or more of their content-area courses in English. The following table lists mainstream classes in which bilingual program students were enrolled during both school terms.

TABLE 7

Mainstream Classes in which Program Students

Were Enrolled, 1981-82

Course	Number of Students	Criteria for Selection
English (Regents)	16	Teacher recommendation
English (Remedial)	64	Teacher recommendation
Math	153	Teacher recommendation
Science	31	Teacher recommendation
Art	26	Free elective
Music	60	Free elective
Typing	34	Free elective
R.C.T. English[a]	13	Not eligible for alternative testing
R.C.T. Math	23	Not eligivle for alternative testing
Social Studies	75	Graduation requirement
Business Education	32	Free elective
Shop	39	Free elective
Physical Education	241	Graduation requirement
French	1	Free elective

[a]"R" classes are intended to prepare students for the competency examinations required by the State of New York to qualify for a high school diploma. Students arriving in this country after the eighth grade can take the competency exams in their native language; otherwise they must pass them in English.

When students are placed in mainstream classes or are fully mainstreamed, their connection with the bilingual program does not end. The program director regularly follows up on students by having mainstream teachers fill out a "yellow bird" report. These short reports provide a description of the progress students are making in adjusting to their new classroom environment. These reports have not been kept in the students' files.

Approximately ten to fifteen students are taking all of their content-area courses in mainstream classes, but continue to receive tutoring assistance from the program's resource teachers and also participate in extracurricular activities sponsored by the program (e.g. field trips).

ENGLISH-LANGUAGE INSTRUCTION

Students scoring below the twentieth percentile on the LAB test are eligible for E.S.L. instruction. All of the E.S.L. courses last two periods a day (80 minutes) and meet five times a week. E.S.L. 1 and 2 are for students with very basic English-language skills; English vestibule is for students who are almost ready for mainstreaming; and "P.B.L." is a remedial course emphasizing reading proficiency and writing skills for students who, although able to speak English, may nonetheless have difficulties in reading and writing. The table below provides the number of classes and the enrollment by E.S.L. course.

TABLE 8

Enrollment by E.S.L. Course

Course	Number of Classes	Average Register	Materials in Use
E.S.L. 1 E.S.L. 2	4 (per term)	25	Lado Series
English Vestibule	2 (per term)	27	Teacher-made materials, short stories, newspapers
P.B.L.: Slow Track English	3 (per term)	29	Curriculum stresses reading for concepts and using good English

Although none of the E.S.L. classes was observed, the evaluator had the opportunity of speaking with one of the E.S.L. 1 and 2 teachers. In describing his classes, the teacher mentioned that there are approximately 30 students in each, and that the students from various language groups are mixed together (including Asian students). The materials used are the Lado series; students are not grouped within classes. The teacher interviewed holds a teaching license in E.S.L. and has been teaching it for the last 25 years.

E.S.L. teachers are under the supervision of an assistant principal other than the one who is responsible for overseeing the bilingual program. Being under two separate departments makes it difficult for the E.S.L. and bilingual resource teachers to jointly plan instructional strategies that can be reinforced in the content-area and E.S.L. courses.

NATIVE-LANGUAGE INSTRUCTION

Regularly scheduled classes in the native language are available in Greek and Spanish. These classes aim at developing and enriching the native-language skills of students. As these are regularly scheduled mainstream classes, non-bilingual students also participate.

TABLE 9

Native-Language Instruction

Course	Number of Classes	Average Class Register	Materials in Use
Native Studies (Spanish 1 and 2)	2	30	Misterio y Pavor Literatura y Arte
Native Studies (Greek)	2	25	Golden Sovereigns The Golden Age of Athens

A slow track Spanish native studies class observed had 12 students in attendance; the majority of the students had reading and writing problems in Spanish. The lesson being taught was a letter-writing exercise; students worked alone at their desks while the teacher moved from student to student to check on the work.

Arabic students do not have a regularly scheduled native-language class; instead, they are provided with developmental and enrichment instruction in their native language by the Arabic-speaking resource teacher and the bilingual paraprofessional. This enrichment is done during the pull-out portion of the program in the content areas.

CONTENT-AREA INSTRUCTION

Science

None of the language groups have a regularly scheduled science class taught bilingually. Students are placed in mainstream science classes and are either pulled out in groups according to need at intervals or the bilingual paraprofessional is assigned to assist the tax-levy teacher until the students' needs are met. The table below provides the number of students served by language group:

TABLE 10

Science in the Native-Language Pull-out Program

Course	Number of Classes	Average Register	Percent of Time Native Language Used
Spanish Science	2	34	85
Greek Science	1	19	50
Arabic Science	1	21	90

- While English is used fifty percent of the time in Greek science, almost no English is used in the Arabic and Spanish science classes.
- The Spanish science class is much larger than the Arabic and Greek classes, reflecting the distribution of students in the program as a whole.

Mathematics

All three language group students are placed in mainstream classes from which they are pulled out in groups as the need arises. They receive

bilingual instruction from the resource teachers or the bilingual paraprofessional is assigned to assist the tax-levy teacher. Greek students, as they do in science, receive fifty percent of their instruction in English. The content of the instruction offered is generally similar to the curriculum followed in the mainstream classes.

Spanish-speaking students have available as an elective a computer class taught in Spanish. This class is part of the gifted instructional component. The evaluator had an opportunity to visit this class; on the day of the visit 19 students were in attendance. The teacher used Spanish for instructional purposes. Students taking this class learn Basic language as well as elementary concepts in computer software and hardware. On the day of the visit, the class was enthusiastically working at individual computer terminals, and students worked together to solve the problem the teacher had assigned.

The evaluator also had an opportunity to observe a mainstream fundamental math class where the majority of the students were of limited English proficiency but were being partially mainstreamed. The students in this class had very low level skills in math and were learning simple arithmetic. On the day of the visit, 30 students were in attendance; they appeared to be very diverse with regard to language background and ability. Instruction was organized on a whole-class basis, with the teacher using a highly structured method of teaching. Quizzes were given frequently, and homework was assigned daily to insure that the students' progress was monitored regularly.

Social Studies

Greek and Hispanic students take social studies classes taught in the native language that are part of the regular school schedule; Arabic students are scheduled into mainstream classes and pulled out for instruction as needed by the Arabic-speaking resource teacher. American history was the course offered bilingually to program students in 1981-82.

There were two Spanish social studies classes in 1981-82, each with an average register of 34 students. In Greek social studies, one class was scheduled with an average register of 21 students. Both Greek and Spanish social studies classes were visited by the evaluator. The Greek class had approximately 13 students and the Spanish class had about 40 students on the day the visits were made. Both classes had students from grade nine through twelve.

The Greek class was conducted in English and Greek; students read aloud from English textbooks, and class participation was quite lively -- mostly in English. In the Spanish class, the students and the teacher used Spanish for the majority of the time. In this class students spent a great deal of their time copying notes from the blackboard. Student participation was limited to a few students.

The large size of the Spanish class, compared to the much smaller Greek class, may have inhibited students from taking an active part in class discussions.

Business Education

In each term, Hispanic students were offered commerical Spanish and Spanish typing courses as electives. Each course was taught for five

periods per week. Commercial Spanish was offered with materials and instruction in Spanish, while materials and classwork in the typing course were essentially balanced between Spanish and English. Each class had a register of about 30 students.

Staffing Pattern in the Content Areas

All the five Title VII staff members were reported to have had extensive teaching experience. Three people had over six years of experience in bilingual education, while the acting project director and Arabic-speaking resource teacher had less than three years' experience in a bilingual program. The data indicate, however, that the Greek and Arabic resource teachers were working in areas other than those in which they were licensed. Table 11 presents information on the professional background of the Title VII staff members.

FUNDING OF INSTRUCTIONAL COMPONENT

Instructional services to participating students are supported by various funding sources. E.S.L. and English-reading instruction for all students is supported by local tax-levy and supplementary Module 5B funds. Services to the Hispanic students are largely funded with local tax-levy and Module 5B monies, with supplemental instructional services provided in mathematics and science by the Spanish resource teacher. Because of their small numbers, content-area instruction is provided to Greek- and Arabic-speaking students on a pull-out basis by the Greek and Arabic resource teachers. As noted in previous reports, because of funding limitations, there continues to be a lack of teaching staff to serve these students (see recommendations). Tables 12 through 15 present this information in tabular form.

TABLE 11

Staff Characteristics

Function(s)	% Time Spent in Function	Date Hired	Education	Certification and License	Years of Monolingual Experience	Years of Bilingual Experience	Years of Experience (E.S.L.)
Project Director (1/2 Yr.) A.P. Social Studies	30 70	9/75 11/79	Sup. & Admin. M.A. Education	NYS A.P. Supervisory NYC French	20	6	None
Project Director (1/2 Yr.) Coordinator of Educational Guidance	50 50	9/79	Cert. Administrator M.A. Spanish	NYC Spanish	15	2 1/2	None
Spanish Bilingual Resource Teacher	100	9/80	M.S. Education	NYC Bil. Common Br. NYS Bil. G.S. JHS Bil. Bio. & G.S. DHS	7 1/2	6 1/2	None
Greek Bilingual Resource Teacher	100	9/75	M.A. Mathematics	NYS NYC Greek	6	6	None
Arabic Bilingual Resource Teacher	100	9/80	M.A. Philosophy	NYS NYC French	11	1	None

TABLE 12

Funding of English Instruction for Students of All Language Backgrounds

Course/ Area	Funding Source	Number of Teachers	Number of Classes
E.S.L. 1& 2	Module 5B Tax Levy	1 1	3 3
English Vestibule	Module 5B	1	2
P.B.L. (Slow Track English)	Tax Levy	2	1,2

TABLE 13

Funding of Content-Area Instructional Services to Hispanic Students

Course/ Area	Funding Source	Number of Teachers	Number of Classes
Native Language	Tax Levy	2	1 each
Mathematics	Tax Levy[a]	1 1	1 1
Social Studies	Module 5B	1	2
Science	Tax Levy[a]	1	2
Vocational Education	Tax Levy	1	1

[a]Ancillary instructional services are provided by the Spanish resource specialist and the bilingual paraprofessional.

TABLE 14

Funding of Content-Area Instructional Services to Greek Students

Course/ Area	Funding Source	Number of Teachers	Number of Classes
Native Language	Tax Levy	1	2
Mathematics	Tax Levy[a]	1	1
Social Studies	Tax Levy	1	1
Science	Tax Levy[a]	1	1

[a]Ancillary instructional services are provided by the Greek resource specialist and the bilingual paraprofessional.

TABLE 15

Funding of Content-Area Instructional Services to Arabic-Speaking Students

Course/ Area	Funding Source	Number of Teachers	Number of Classes
Mathematics	Tax Levy[a]	1	1
Social Studies	Tax Levy[a]	1	1
Science	Tax Levy[a]	1	1

[a]Ancillary instructional services are provided by the Arabic resource specialist and the bilingual paraprofessional.

IV. NON-INSTRUCTIONAL COMPONENT

CURRICULUM DEVELOPMENT

The resource teachers, in addition to providing instructional assistance to program students, are responsible for the adaptation of English-language curricula into the three target languages.

Curriculum development activities entail mostly the translation of materials used in the mainstream classes into Arabic, Greek, and Spanish. The materials translated are mimeographed and disseminated to the students. Students enrolled in mainstream classes, but who are pulled out for instruction in their native language, can use the translated materials as a supplement to English textbooks.

Materials have been translated into Spanish for biology, earth science, and health careers; into Greek for science and mathematics; and into Arabic for science and social studies.

The resource specialists' teaching assignments in the pull-out instructional component limit the time they can dedicate to curriculum development and adaptation. This is not conducive to a major curriculum development effort based on the particular needs of the three target language groups. Another obstacle to the curriculum development efforts of the resource teachers is the lack of commercial materials available in the school written in Greek and Arabic that might provide them with a general orientation to curriculum development, as well as ideas for the adaptation of materials.

Lastly, the resource teachers have had to write some translated materials by hand. This is a cumbersome task, and results in some loss of quality and readability when they are mimeographed.

In spite of these drawbacks, the resource teachers have produced several sets of translated materials which are helpful to the students.

SUPPORTIVE SERVICES

Personal and vocational counseling is provided by the program director who is also the coordinator of educational guidance. The resource teachers also provide assistance in this area.

Group counseling sessions are not offered on a regular basis, but have taken place when specific problems of a critical nature have arisen. This year, sessions were scheduled to address problems stemming from religious differences among the Arabic students.

When students with serious problems (e.g. child abuse, alcoholism) come to the attention of the program director, they are referred to an appropriate community agency. Problems of a critical nature, however, are not frequent.

Students in the bilingual program, for the most part, do not seem to have serious problems with attendance or discipline. Absenteeism is more commonly found among those older students who are in a grade not commensurate with their age and/or who are placed in the low literacy instructional component. For these students, the experiences they confront in a new country and in an educational system to which they have not been socialized

may be, at times, terribly frustrating and depressing. Students of this type could probably benefit from individualized counseling focussed on their particular needs. The strength of the counseling program lies in its emphasis on educational guidance, particularly in those areas related to the college application process.

STAFF DEVELOPMENT

Four workshops were held for the Title VII program staff. The topics addressed were: mastery learning, testing, and individualization of instruction. These workshops, which were also offered in the previous year (see 1980-81 evaluation), were conducted by the acting assistant principal for foreign languages and the project director. Tax-levy bilingual teachers did not participate in the workshops, although they were invited.

Besides attending the abovementioned workshops, the program staff participated in monthly meetings also attended by the foreign-language teachers who have bilingual teaching assignments.

The resource teachers are enrolled in part-time degree programs at Long Island University and Brooklyn College. The paraprofessionals are also enrolled in courses at Long Island University; the three are working toward fulfilling the requirements for master's degrees.

PARENTAL AND COMMUNITY INVOLVEMENT

The trilingual focus of the program as well as the single working parent make it very difficult to maintain an active advisory board

with parental representation from all three language groups. Contacts with parents are mostly through individual visits, phone calls, and school-wide activities such as open house and field trips for which parents volunteer as chaperones.

AFFECTIVE DOMAIN

Beyond the reflection of student attitudes and achievement in test data, there are other kinds of observations which are indicative of the program's success. Some relevant information includes student participation in extracurricular activities, student honors and achievements, and levels of reported behavior problems. These are discussed briefly below.

Extracurricular Activities

Some of the organized sports and activities in which the students of the program participate are: soccer, weight-lifting, yoga, folk dancing, swimming, and volleyball. The students also participate in field trips organized by the bilingual staff.

Honors, College Admissions

Ten students from the program are in the National Honor Society. Approximately ninety percent of the students in the program go on to college. Some are participating in special academic programs sponsored by the City University.

One student participated in the Simón Bólivar essay contest and his entry received an honorable mention.

Vandalism, Suspensions

Vandalism, drug abuse, and gang membership are not problems found among program students. Few behavior problems were reported during 1981-82.

Other Indicators

Interviews with three students revealed that they held positive attitudes toward the program and its staff. When asked what they liked about the program, some of the things they mentioned were:

--being able to learn and receiving assistance in applying to colleges;

--the unity among the students;

--the girls' soccer team organized by one of the bilingual resource teachers;

--the preparation the program provides to succeed in college; and

--the field trips.

One student, speaking in general about the school, said he liked the freedom to choose his own courses, an option he did not have in the school he attended in his native country.

In all of the classes observed, the students gave the impression of enjoying what they do. They take notes diligently, are attentive to the teachers, and eager to answer questions. For many of these students, school is not seen as a chore.

In many ways the program, with its emphasis on achievement and higher education as a goal for the majority of its participants, seems to increase these students' confidence and self esteem.

V. FINDINGS

ASSESSMENT PROCEDURES, INSTRUMENTS, AND FINDINGS

The following section presents the assessment instruments and procedures, and the results of the testing to evaluate student achievement in 1981-82. Students were assessed in English language development, growth in their mastery of their native language, mathematics, social studies, science, business, and vocational education. The following are the areas assessed and the instruments used:

English as a second language -- CREST (Criterion Referenced English Syntax Test, Levels I, II, III)

Oral ability in English -- Scale for Rating Pupil's Ability to Speak English

Mathematics performance -- Teacher-made tests

Science performance -- Teacher-made tests

Social Studies performance -- Teacher-made tests

Native language arts performance -- Teacher-made tests

Business and vocational education performance -- Teacher-made tests

Attendance -- School and program records

The instrument used to measure growth in English language was the Criterion Referenced English Syntax Test (CREST), which tests mastery of specific syntactic skills at three levels. Material at the beginning and intermediate levels of the CREST is broken down into 25 objectives per level, such as present-tense forms of the verb "to be" (Level I), or possessive adjectives and pronouns (Level II). Material at the advanced level (Level III) is organized into 15 objectives, such as reflexive pronouns. At each level, students are asked to complete four items for

each objective. An item consists of a sentence frame for which the students must supply a word or phrase chosen from four possibilities. Mastery of a skill objective is determined by a student's ability to answer at least three out of four items correctly.

This report provides information on the average number of objectives mastered, and the average number of objectives mastered per month of treatment by students who received E.S.L. instruction in fall and spring semesters. Students were pre-tested in the fall and post-tested in the spring terms. Because some students advanced during the year, some were given a higher level at post-test than at pre-test time. Performance breakdowns are reported by instructional component in two ways. First, Tables 16, 18, 20, and 22 contain grade and level breakdowns for students who were pre- and post-tested with the same test level. In addition, in Tables 17, 19, 21, and 23, a grade and test level breakdown is reported for students who were administered a higher level of the CREST when post-tested than when pre-tested. For students given different levels of the test at pre- and post-testing, it was assumed that all objectives of the pre-test level were mastered by the time of post-testing. If Levels I and III were used, the additional assumption was made that all Level II objectives were also mastered.

It should be noted that in addition to the three instructional components (career, gifted, and low literacy) described in Chapter III, CREST performance was also reported for students in the "academic" component -- students who participated in both career and gifted courses.

Student performance on the Board of Education-developed Scale for Rating Pupil's Ability to Speak English is presented in Table 24 by

instructional component. This six-point scale measures student achievement in understanding and speaking English.

Although not an objective in the program's evaluation design, rates of success of students in mathematics, science, social sudies, and native language arts courses taught in the bilingual program have been reported by language of instruction and by grade in Tables 25 through 31. These tables contain the numbers of students reported as taking courses in the relevant subject areas, the number reported to have passed, and the percent passing, for fall and for spring courses separately.

Student performance on teacher-made tests of business and vocational education is reported by language group in Tables 31, 32, and 33 for the fall and spring semesters. The program proposed to compare the performance of these students to the performance of mainstream students in equivalent career development classes. However, data were not provided for mainstream students by semester and therefore the statistical analysis could not be performed.

Comparisons of the attendance rates of program participants with that of the school as a whole are presented by language group in Tables 34, 35, and 36. These tables contain average rates for the school and for the various participant groups, the percent differences between school and program attendance, values of the z statistic, and its level of statistical significance.

TABLE 16

Performance of Students Tested on the
Criterion Referenced English Syntax Test

(CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in Career Component)

	LEVEL I					LEVEL III					TOTALS			
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Months of	Average Number of Objectives Mastered	
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Treatment	Gain	Gain/ Month
9	1	12.0	10.0	-2.0	-0.3	-	-	-	-	-	1	7.2	-2.0	-0.2
10	1	6.0	4.0	-2.0	-0.3	5	11.2	11.6	0.4	0.1	6	7.1	0.0	0.1
11	-	-	-	-	-	8	11.4	11.9	0.5	0.1	8	7.5	0.5	0.1
12	-	-	-	-	-	2	6.0	10.5	4.5	0.6	2	7.5	4.5	0.6
Total	2	9.0	7.0	-2.0	-0.3	15	10.6	11.6	1.0	0.1	17	7.4	0.6	0.1

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- On the average, students in the Career Component, pre- and post-tested at the same test level, gained 0.1 objective per month of instruction. These results fail to meet the criterion set as the program objective: 65 percent of the students mastering 1.5 objectives per month.

- Of the 17 students pre- and post-tested at the same test level, none mastered 1.5 objectives per month.

TABLE 17

Performance of Students Tested on the
Criterion Referenced English Syntax Test

(CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in Career Component)

	PRE-TEST=LEVEL I AND POST-TEST=LEVEL III					PRE-TEST=LEVEL II AND POST-TEST=LEVEL III					TOTALS			
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average	Average Number of Objectives Mastered	
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Months of Treatment	Gain	Gain/ Month
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	1	2.0	1.0	24.0	3.0	1	7.9	24.3	3.0
11	2	17.0	10.0	43.0	5.7	2	14.0	7.0	18.0	3.1	4	6.8	30.5	4.4
12	1	12.0	4.0	42.0	5.4	-	-	-	-	-	1	7.7	42.0	5.4
Total	3	15.3	8.0	42.7	5.6	3	10.0	5.0	20.0	3.1	6	7.2	31.3	4.3

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- It should be noted that when gains are calculated for students who are pre-tested at one level and post-tested at another level, it is assumed that they mastered all objectives between the pre- and post-test levels. For example, students pre-tested at Level I and post-tested at Level III reflect gains which include all of the Level II objectives (25 items). This may result in exaggerated gain scores.

- On the average, the six students in the Career Component, pre- and post-tested at different test levels, gained over four objectives per month of instruction. These results surpass the criterion set as the program objective: 65 percent of the students mastering 1.5 objectives per month.

- All six students pre- and post-tested at different test levels gained from 3.0 to 5.7 objectives per month.

TABLE 18

Performance of Students Tested on the
Criterion Referenced English Syntax Test

(CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in Gifted Component)

	LEVEL II					LEVEL III					TOTALS		
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average	Average Number of Objectives Mastered
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Months of Treatment	Gain	Gain/ Month
9	-	-	-	-	-	3	7.6	9.7	2.0	0.3	3	7.6	2.0	0.3
10	1	9.0	19.0	10.0	1.3	5	11.8	13.2	1.4	0.2	6	8.0	2.8	0.4
11	1	15.0	18.0	3.0	0.4	8	12.7	12.6	-0.1	0.0	9	7.4	0.2	0.0
12	1	15.0	21.0	6.0	0.8	9	11.2	12.0	0.8	0.1	10	7.7	1.3	0.2
Total	3	13.0	19.3	6.3	0.8	25	11.4	12.1	0.8	0.1	28	7.6	1.4	0.2

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- In general, students in the Gifted Component, pre- and post-tested at the same test level, gained 0.2 objectives per month of instruction. These results fail to meet the criterion set as the program objective: 85 percent of the students mastering at least two objectives per month.

- None of the 28 students pre- and post-tested at the same test level gained at least two objectives per month.

- Matched pre- and post-test scores were provided for approximately 41 percent of the program students in this instructional sequence.

TABLE 19

Performance of Students Tested on the
Criterion Referenced English Syntax Test

(CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in Gifted Component)

	PRE-TEST=LEVEL I AND POST-TEST=LEVEL III				
		Average Number of Objectives Mastered			
Grade	N	Pre	Post	Gain	Gain/ Month
9	-	-	-	-	-
10	-	-	-	-	-
11	2	16.0	5.5	39.5	5.2
12	1	11.0	4.0	43.0	5.8
Total	3	14.3	5.0	40.7	5.4

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- It should be noted that when gains are calculated for students who are pre-tested at one level and post-tested at another level, it is assumed that they mastered all objectives between the pre- and post-test levels. For example, students pre-tested at Level I and post-tested at Level III reflect gains which include all of the Level II objectives (25 items).

- On the average, the three students in the Gifted Component, pre-tested at Level I and post-tested at Level III gained 5.4 objectives per month of instruction. The results meet the criterion set as the program objective: 80 percent of the students mastering at least two objectives per month.

TABLE 20

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in General Component [Low Literacy])

	LEVEL I					LEVEL II					LEVEL III					TOTALS			
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Months of	Average Number of Objectives Mastered	
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Treatment	Gain	Gain/ Month
9	4	7.2	9.8	2.5	0.4	1	2.0	9.0	7.0	1.4	6	8.8	8.5	-0.3	0.0	11	6.2	1.4	0.3
10	4	3.0	6.2	3.2	0.4	4	3.0	9.2	6.2	1.0	2	10.5	10.0	-0.5	-0.1	10	7.2	3.7	0.6
11	2	8.0	12.0	4.0	0.6	1	16.0	22.0	6.0	1.2	3	8.7	9.7	1.0	0.1	6	7.1	2.8	0.5
12	-	-	-	-	-	-	-	-	-	-	2	8.5	11.0	2.5	0.3	2	7.3	2.5	0.3
Total	10	5.7	8.8	3.1	0.4	6	5.0	11.3	6.3	1.1	13	9.0	9.4	0.4	0.1	29	6.8	2.6	0.4

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- On the average, students in the General Component (low-literacy students), pre- and post-tested at the same test level, gained 0.4 objectives per month of instruction. These results fail to meet the criterion set as the program objective: 60 percent of the students mastering at least 0.5 objectives per month.

- However, students at Level II surpassed the criterion set as the program objective.

- Pre- and post-test scores were provided for approximately 50 percent of the program students in this instructional sequence.

TABLE 21

Performance of Students Tested on the
Criterion Referenced English Syntax Test

(CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in General Component [Low Literacy])

	PRE-TEST=LEVEL I AND POST-TEST=LEVEL II					PRE-TEST=LEVEL I AND POST-TEST=LEVEL III					TOTALS			
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average	Average Number of Objectives Mastered	
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Months of Treatment	Gain	Gain/ Month
9	-	-	-	-	-	2	8.0	5.0	47.0	8.8	2	6.0	47.0	8.8
10	1	1.0	6.0	30.0	4.2	1	0.0	2.0	52.0	7.8	2	6.9	41.0	6.0
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	1.0	6.0	30.0	4.2	3	5.3	4.0	48.7	8.5	4	6.4	44.0	7.3

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- It should be noted that when gains are calculated for students who are pre-tested at one level and post-tested at another level, it is assumed that they mastered all objectives between the pre- and post-test levels. For example, students pre-tested at Level I and post-tested at Level III reflect gains which include all of the Level II objectives (25 items).

- All four of the General Component students who were pre- and post-tested at different test levels met the program objective of mastering at least 0.5 objectives per month of instruction.

TABLE 22

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (Students in Academic[a] Component)

	LEVEL I					LEVEL II					LEVEL III					TOTALS			
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered		
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Average Months of Treatment	Gain	Gain/ Month
9	2	3.0	6.0	3.0	0.4	2	10.5	17.0	6.5	0.8	7	7.6	9.9	2.3	0.5	11	7.4	3.2	0.5
10	2	3.5	14.0	10.5	1.4	4	8.0	16.0	8.0	1.0	13	9.8	10.6	0.8	0.1	19	7.1	3.3	0.4
11	2	3.5	8.5	5.0	0.8	1	7.0	16.0	9.0	1.2	17	8.4	9.8	1.4	0.2	20	7.2	2.2	0.3
12	-	-	-	-	-	-	-	-	-	-	9	11.3	10.6	-0.8	-0.1	9	8.0	-0.8	-0.11
Total	6	3.3	9.5	6.2	0.8	7	8.6	16.3	7.7	1.1	46	9.2	10.2	0.9	0.1	59	7.3	2.3	0.3

[a]Students participating in both career and gifted courses.

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

*In general, students in the Academic Component who were pre- and post-tested at the same test level mastered 0.3 objectives per month of instruction.

*Student performance ranged from a low of 0.8 objectives per month at Level I to a high of 1.1 objectives per month at Level II.

TABLE 23

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level

(Students in Academic[a] Component)

	PRE-TEST=LEVEL I POST-TEST=LEVEL II					PRE-TEST=LEVEL I POST-TEST=LEVEL III					PRE-TEST=LEVEL II POST-TEST=LEVEL III					TOTALS			
		Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Months of	Average Number of Objectives Mastered	
Grade	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Treatment	Gain	Gain/ Month
9	4	13.5	18.0	29.5	4.0	1	3.0	1.0	48.0	6.3	1	4.0	7.0	28.0	3.6	6	7.5	32.3	4.3
10	4	12.0	17.2	30.2	4.5	2	16.5	7.5	41.0	5.3	2	9.5	9.5	25.0	3.1	8	7.3	31.6	4.4
11	4	13.8	13.8	25.0	3.7	-	-	-	-	-	2	12.5	11.0	23.5	3.2	6	6.9	24.5	3.6
12	1	19.0	16.0	22.0	2.8	-	-	-	-	-	1	25.0	15.0	15.0	1.8	2	7.9	18.5	2.3
Total	13	13.5	16.3	27.8	4.0	3	12.0	5.3	43.3	5.6	6	12.2	10.5	23.3	3.0	22	7.3	28.7	3.9

[a]Students participating in both career and gifted courses.

Note: Number of objectives for each level: Level I (25), Level II (25), Level III (15). All students were pre-tested in the fall and post-tested in the spring.

- It should be noted that when gains are calculated for students who are pre-tested at one level and post-tested at another level, it is assumed that they mastered all objectives between the pre- and post-test levels. For example, students pre-tested at Level I and post-tested at Level III reflect gains which include all of the Level II objectives (25 items).

- In general, students in the Academic Component who were pre- and post-tested at different test levels mastered 3.9 objectives per month of instruction.

- Gains ranged from a low of 3.0 objectives per month (pre-test Level II, post-test Level III) to 4.0 objectives per month (pre-test Level I, post-test Level II), to 5.6 objectives per month (pre-test Level I, post-test Level III).

TABLE 24

Oral Language Ability

Pre-test Rating, Number and Percentage of Students
Advancing One Level on the Scale for Rating Pupil's Ability to Speak English
(Comprehension and Speaking) by Instructional Component

Career Component			Low Literency			Academic Component			Gifted Component		
					COMPREHENSION						
Pre-test Rating	N	Percent Increasing One Level	Pre-test Rating	N	Percent Increasing One Level	Pre-test Rating	N	Percent Increasing One Level	Pre-test Rating	N	Percent Increasing One Level
B	10	60	B	1	100	B	15	20	B	9	33.3
C	8	88	C	15	80	C	37	78	C	15	87.0
D	4	100	D	13	77	D	30	100	D	9	100.0
E	1	0	E	20	85	E	13	92	E	2	100.0
F	2	100	F	6	100	F	14	86	-	-	-
Total	25	76	Total	55	84	Total	109	79	Total	35	77.0
					SPEAKING						
2	10	60	2	1	100	2	15	20	2	8	25.0
3	8	88	3	15	80	3	37	78	3	14	86.0
4	4	100	4	11	82	4	29	100	4	9	100.0
5	-	-	5	15	93	5	14	100	5	1	100.0
6	3	100	6	9	89	6	13	77	-	-	-
Total	25	80	Total	51	86	Total	108	79	Total	32	75.0

[a]Students participating in both career and gifted courses.

TABLE 24, continued

·Career Component students' test results meet the criterion set as the program objective (75 percent advancing one level).

·Low Literacy Component students' test results met and exceeded the criterion set as the program objective (60 percent advancing one level).

·Seventy-nine percent of the students in the Academic Component advanced one level in both the comprehension and speaking parts of the scale.

·Gifted component students test results show that 77 percent of the students advanced one level in comprehension and 75 percent in speaking.

·Overall, there is an apparent relationship between gains and pre-test ratings. High pre-test ratings, for example "B" in comprehension and "2" in speaking, are generally related to lower gains.

Note: The program set as an objective that at least 85 percent of the Gifted Component students would improve at least two levels on the scale. Data were reported for 26 students rated in comprehension and 24 rated in speaking. None of these students advanced two levels on the scale. (See Recommendations).

TABLE 25

Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Content-Area Courses by Grade and Language of Instruction, Fall

		ENGLISH			SPANISH			TOTAL	
Subject	Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Math	9	27	5	18.5	1	1	100.0	28	21.0
	10	34	19	55.9	3	1	33.3	37	54.0
	11	30	18	60.0	14	12	85.7	44	68.0
	12	17	13	76.5	4	3	75.0	21	76.0
	Totals	108	55	51.0	22	17	77.0	30	55.0
Science	9	13	5	38.5	25	9	36.0	38	37.0
	10	13	7	53.8	28	20	71.4	41	66.0
	11	25	20	80.0	16	8	50.0	41	68.0
	12	10	9	90.0	10	9	90.0	20	90.0
	Totals	61	41	67.0	79	46	58.0	140	62.0
Social Studies	9	16	6	37.5	16	7	43.8	32	41.0
	10	22	9	40.9	17	12	70.6	39	54.0
	11	29	15	51.7	25	14	56.0	54	54.0
	12	5	4	80.0	12	9	75.0	17	76.0
	Totals	72	34	47.0	70	42	60.0	142	54.0

- In the fall, 51 percent of the Spanish-speaking students instructed in English and 77 percent of the students instructed in Spanish passed teacher-made examinations in mathematics.
- Sixty-seven percent of the students instructed in English and 58 percent of the students instructed in Spanish passed teacher-made examinations in science.
- In social studies courses, 47 percent of the students instructed in English and 60 percent of the students instructed in Spanish passed teacher-made examinations in the fall.
- The overall passing rates in content-area subjects in the fall were lowest for ninth-grade students and highest for the twelfth graders.

TABLE 26

Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Content-Area Courses by Grade and Language of Instruction, Spring

		ENGLISH			SPANISH			TOTAL	
Subject	Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Math	9	29	13	44.8	1	1	100.0	30	47.0
	10	42	25	59.5	4	4	100.0	46	63.0
	11	35	25	71.4	5	2	40.0	40	68.0
	12	11	7	63.6	3	3	100.0	14	71.0
	Totals	117	70	60.0	13	10	77.0	130	62.0
Science	9	13	9	69.2	8	7	38.9	31	52.0
	10	16	10	62.5	29	23	79.3	45	73.0
	11	19	14	73.7	16	11	68.8	35	74.0
	12	9	9	100.0	5	5	100.0	14	100.0
	Totals	57	42	70.0	68	46	68.0	125	70.0
Social Studies	9	9	2	50.0	17	9	52.9	21	52.0
	10	17	12	70.0	24	13	54.2	41	61.0
	11	22	14	63.0	20	15	75.0	42	69.0
	12	3	3	100.0	6	5	83.3	9	89.0
	Totals	46	31	67.0	67	42	63.0	113	65.0

- In general, passing rates increased from the fall to the spring.
- In the spring, 60 percent of the students instructed in English passed teacher-made mathematics examinations. For students instructed in Spanish, the passing rate remained at the fall rate of 77 percent.
- In science courses, 70 percent of the students instructed in English and 68 percent of the students instructed in Spanish passed teacher-made examinations in the spring.
- Sixty-seven percent of the students instructed in English and 63 percent of the students instructed in Spanish passed teacher-made social studies examinations.
- As in the fall, the lowest overall passing rates were found in grade 9 and the highest in grade 12.

TABLE 27

Number and Percent of Arabic-Speaking Students Passing Teacher-Made Examinations in Content-Area Courses by Grade and Language of Instruction, Fall

		ENGLISH			ARABIC			TOTAL	
Subject	Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Math	9	5	2	40.0	-	-	-	5	40.0
	10	4	1	25.0	-	-	-	4	25.0
	11	6	3	50.0	1	1	100.0	4	25.0
	12	5	3	60.0	-	-	-	5	60.0
	Totals	20	9	45.0	1	1	100.0	21	48.0
Science	9	2	1	50.0	12	4	33.3	14	36.0
	10	1	1	100.0	8	4	50.0	9	56.0
	11	-	-	-	12	7	58.3	12	58.0
	12	3	3	100.0	4	4	100.0	2	100.0
	Totals	6	5	83.0	36	19	63.0	42	57.0
Social Studies	9	2	1	50.0	12	4	33.3	14	43.0
	10	1	0	0.0	4	4	100.0	5	80.0
	11	2	0	0.0	11	6	54.5	13	46.0
	12	1	1	100.0	5	4	80.0	6	20.0
	Totals	6	2	33.0	32	18	56.0	36	56.0

- For Arabic-speaking students instructed in English, 45 percent passed teacher-made examinations in mathematics. Information was provided for only one student instructed in Arabic.

- In science courses, 83 percent of the students instructed in English and 63 percent of the students instructed in Arabic passed teacher-made examinations in the fall.

- Thirty-three percent of the students instructed in English and 56 percent of the students instructed in Arabic passed teacher-made examinations in social studies.

TABLE 28

Number and Percent of Arabic-Speaking Students Passing Teacher-Made Examinations in Content-Area Courses by Grade and Language of Instruction, Spring

		ENGLISH			ARABIC			TOTAL	
Subject	Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Math	9	8	5	62.5	-	-	-	8	12.5
	10	5	5	100.0	2	1	50.0	7	50.0
	11	5	3	60.0	2	2	100.0	7	71.0
	12	4	3	75.0	-	-	-	4	75.0
	Totals	22	16	73.0	4	3	75.0	26	73.0
Science	9	-	-	-	9	8	88.9	9	88.9
	10	-	-	-	5	3	60.0	5	10.0
	11	2	2	100.0	6	4	66.7	8	75.0
	12	5	5	100.0	1	0	0.0	6	83.0
	Totals	7	7	100.0	21	15	71.0	28	79.0
Social Studies	9	1	1	100.0	7	4	57.1	8	13.0
	10	-	-	-	5	3	60.0	5	60.0
	11	1	1	100.0	5	5	100.0	6	100.0
	12	1	1	100.0	4	1	80.0	5	40.0
	Totals	3	3	100.0	21	13	62.0	24	67.0

- Seventy-three percent of the students instructed in English and 75 percent of the students instructed in Arabic passed teacher-made mathematics examinations.
- One hundred percent of the students instructed in English passed teacher-made examinations in both science and social studies.
- The passing rates for students instructed in Arabic in science and social studies were 71 percent and 62 percent, respectively.
- Performance by Arabic-speaking students was substantially higher in the spring term than in the fall.

TABLE 29

Number and Percent of Greek-Speaking Students Passing Teacher-Made Examinations in Content-Area Courses by Language of Instruction, Fall and Spring

	ENGLISH			GREEK			TOTAL	
Fall Subjects	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Mathematics	4	0	0.0	10	8	80.0	14	57.0
Science	3	3	100.0	18	15	83.3	21	85.7
Social Studies	5	3	60.0	13	10	76.9	18	72.2
Spring Subjects								
Mathematics	3	3	100.0	11	9	81.8	14	85.7
Science	4	2	50.0	15	12	80.0	19	73.7
Social Studies	3	1	33.3	13	12	92.3	16	81.3

- In general, students instructed in Greek achieved higher passing rates than students instructed in English.

- Overall passing rates ranged from 57 percent (fall mathematics classes) to 85.7 percent (spring math and fall science).

TABLE 30

Number of Spanish-Speaking
Students Attending Courses and Percent Passing
Teacher-Made Examinations in Native Language Arts, Fall and Spring

Course	Grade 9		Grade 10		Grade 11		Grade 12		Total	
	N	% Passing	N	% Passing	N	% Passing	N	% Passing	N	% Passing
Spanish (Fall)	17	47.1	21	61.9	20	75.0	4	25.0	62	60.0
Spanish (Spring)	16	43.8	22	72.7	17	82.4	-	-	55	67.0

- The overall passing rate of Spanish-speaking students in native language classes was 60 percent in the fall and 67 percent in the spring.
- The highest passing rates in both semesters were achieved by students in grade 11.

TABLE 31

Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Career Development Courses by Grade and Language of Instruction, Fall and Spring

		ENGLISH			SPANISH			TOTAL	
Fall Subjects	Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Business Education	9	13	8	62.0	30	10	33.3	43	42.0
	10	10	5	50.0	30	20	66.6	40	63.0
	11	12	8	67.0	28	19	68.0	40	68.0
	12	3	3	100.0	7	5	71.0	10	80.0
	Totals	38	24	63.0	95	54	57.0	133	59.0
Vocational Education	9	21	9	43.0	-	-	-	21	43.0
	10	18	14	78.0	-	-	-	18	78.0
	11	6	2	33.3	-	-	-	6	33.3
	12	2	2	100.0	-	-	-	2	100.0
	Totals	47	27	47.0	-	-	-	47	47.0

		ENGLISH			SPANISH			TOTAL	
Spring Subjects	Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing	N	Percent Passing
Business Education	9	9	6	67.0	12	6	50.0	21	57.0
	10	10	6	60.0	19	16	84.0	29	76.0
	11	14	10	71.0	22	17	77.0	36	75.0
	12	4	4	100.0	5	4	80.0	9	80.0
	Totals	37	26	70.0	58	43	74.0	95	73.0
Vocational Education	9	10	5	50.0	-	-	-	10	50.0
	10	10	8	80.0	-	-	-	10	80.0
	11	5	4	80.0	-	-	-	5	80.0
	12	1	1	100.0	-	-	-	1	100.0
	Totals	26	18	69.0	-	-	-	26	69.0

- Spanish-speaking students' overall performance in business and vocational education courses improved from the fall to the spring.
- In general, the highest passing rates were achieved by twelfth-grade students.

TABLE 32

Number of Arabic-Speaking Students Attending Classes and Percent Passing Teacher-Made Examinations in Career Development Courses by Grade, Fall and Spring

		FALL TOTAL		SPRING TOTAL	
Subjects	Grade	N	Percent Passing	N	Percent Passing
Business Education	9	10	30.0	10	80.0
	10	7	29.0	3	100.0
	11	6	33.0	5	100.0
	12	4	100.0	4	75.0
TOTAL		27	41.0	22	86.0
Vocational Education	9	8	25.0	3	67.0
	10	4	50.0	2	100.0
	11	2	0.0	1	100.0
	12	1	100.0	3	100.0
TOTAL		15	33.0	9	89.0

.Arabic-speaking students' overall performance in business and vocational education courses was considerably higher in the spring term than in the fall.

TABLE 33

Number of Greek-Speaking Students Attending Classes and Percent Passing Teacher-Made Examinations in Career Development Courses, Fall and Spring

	FALL TOTAL		SPRING TOTAL	
Subjects	N	Percent Passing	N	Percent Passing
Business Education	12	92.0	19	63.0
Vocational Education	4	75.0	3	100.0

.The overall passing rates of students in business education courses declined from fall to spring; however, the overall passing rates in vocational education increased.

TABLE 34

Significance of the Difference Between
the Attendance Percentage of Spanish-Speaking Students
and the Attendance Percentage of the School

Grade	N	Mean Percentage	Standard Deviation
9	37	79.3	21.8
10	55	86.1	16.6
11	56	89.0	11.1
12	18	93.8	3.9
Total	166	86.4	16.0

Average School-Wide Attendance Percentage: 73.41

Percentage Difference = 12.9 z = 3.79 p = .001

- The average attendance (86.4 percent) for Spanish-speaking students was 12.9 percentage points higher than the 73.41 percent average for the whole school. The difference in attendance percentages is statistically significant at the .001 level; that is, it is not a chance occurrence.
- There is a positive relation between attendance percent and grade: the higher the grade the higher the attendance.
- The standard deviation is smaller as grade increases. This indicates that students with lower attendance in the early grades either drop out or attend more as grade increases.

TABLE 35

Significance of the Difference Between
the Attendance Percentage of Arabic-Speaking Students and
the Attendance Percentage of the School

Grade	N	Mean Percentage	Standard Deviation
9	13	90.2	9.7
10	8	85.2	14.4
11	7	90.0	9.8
12	7	94.5	3.6
Total	35	89.9	10.2

Average School-Wide Attendance Percentage: 73.41

Percentage Difference = 16.49 $z = 2.2$ $p = .01$

- The average attendance (89.9 percent) for Arabic-speaking students was 16.49 percentage points higher than the 73.41 percent average for the school. The difference in attendance percentages is statistically significant at the .01 level; that is, it is not a chance occurrence.

TABLE 36

Significance of the Difference Between
the Attendance Percentage of Greek-Speaking Students and
the Attendance Percentage of the School

Grade	N	Mean Percentage	Standard Deviation
9	3	97.7	1.8
10	6	97.6	1.6
11	10	90.0	13.2
12	3	96.2	3.0
Total	22	93.9	9.5

Average School-Wide Attendance Percentage: 73.41

Percentage Difference = 20.49	z = 2.17	p = .01

- The average attendance (93.9 percent) for Greek-speaking students was 20.4 percentage points higher than the 73.4 percent average for the whole school. The difference in attendance is statistically significant at the .01 level, as it was for other program students.

- Attendance rates are generally high. The lower attendance rate and higher standard deviation for grade 11 students indicate that there were several students with extremely low attendance rates.

SUMMARY OF FINDINGS

English

The program objective that 65 percent of the Career Component students master at least 1.5 objectives per month of instruction on the CREST was met by all six students who were pre- and post-tested at different levels and by none of the 17 students who were pre- and post-tested at the same level.

The program objective that 85 percent of the Gifted Component students master at least two objectives per month on the CREST was met by the three students who were pre- and post-tested at different levels, but not by the 28 students who were pre- and post-tested at the same level.

The program objective that 60 percent of the low literacy students master at least 0.5 objectives per month of instruction on the CREST was met by the six students pre- and post-tested at Level II. The objective was not met by students pre- and post-tested at Levels I and III who were pre- and post-tested at the same test level. The program objective, however, was met by all four of the low literacy students who were pre- and post-tested at different levels.

Academic Component students were also pre- and post-tested with the CREST. Fifty-nine students were pre- and post-tested at the same level and 22 students were pre- and post-tested at different levels. There were no stated program objectives for students in this sequence.

The program objective that 75 percent of the Career Component students gain at least one level on the scale measuring English-speaking

ability was met in both the comprehension and the speaking sections of the scale.

The program objective that 85 percent of the Gifted Component students gain two levels on the scale measuring English ability was not met. None of these students gained two levels. However, 77 percent gained one level in comprehension and 75 percent gained one level in speaking ability.

The program objective that 60 percent of the low literacy students gain one level on the scale measuring English-speaking ability was met in both comprehension and speaking ability sections of the scale.

Seventy-nine percent of the Academic Component students gained one level on both the comprehension and speaking ability sections of the scale measuring English-speaking ability. There were no stated program objectives for students in this sequence.

Content-Area Courses

Although there were no objectives in the program's evaluation design for student achievement in mathematics, science, and social studies, performance data were reported for program students.

The data reported for program students taking teacher-made mathematics examinations reveal that students tested in their native language had higher overall achievement scores than students tested in English. This was true for Spanish- and Arabic-speaking students in the fall and spring, and Greek-speaking students in the fall.

The performance of program students on teacher-made science tests shows that Spanish- and Arabic-speaking students tested in their native language did not perform as well as students tested in English in both the fall and spring. Greek-speaking students tested in their native language generally achieved higher passing rates than their counterparts tested in English in the spring semester only.

Student performance on teacher-made social studies tests indicate that Spanish-speaking students tested in their native language achieved a higher overall passing rate in the fall than program students tested in English. However, in the spring, program students tested in English achieved a slightly higher overall passing rate than those tested in Spanish (67 and 63 percent passing, respectively). Arabic-speaking students tested in their native language on teacher-made social studies tests had a higher overall passing rate in the fall than their counterparts tested in English. In the spring, however, the three students tested in English had passing rates of 100 percent, and the program students tested in Arabic had an overall passing rate of 62 percent. Greek-speaking students tested in their native language on teacher-made social studies tests achieved higher overall passing rates in the fall and spring than students tested in English.

Native Language Arts

The overall passing rate of Spanish-speaking students in their native language arts was 60 percent in the fall and 67 percent in the spring.

Career Development Courses

According to information provided by the project director, in the fall, the overall passing rate (59 percent) of Spanish-speaking students in

business education was 16 percentage points lower than the mainstream passing rate (75 percent). The overall passing rate (41 percent) of Arabic-speaking students was 34 percentage points lower than the mainstream passing rate while the overall passing rate (92 percent) for Greek-speaking program students was 17 percentage points higher. The overall passing rate (47 percent) of Spanish-speaking students in vocational education courses was 26 percentage points lower that the mainstream passing rate (73 percent). The overall passing rate (33 percent) of Arabic-speaking program students was 40 percentage points lower than the mainstream passing rate while the passing rate (75 percent) for Greek-speaking program students was two percentage points higher.

In the spring, the overall passing rate (73 percent) of Spanish-speaking students in business education courses was two percentage points lower than the mainstream passing rate (75 percent). The overall passing rate (86 percent) of Arabic-speaking students was 11 percentage points higher than the mainstream passing rate while the overall passing rate (63 percent) for Greek-speaking program students was 12 percentage points lower. The overall passing rate (69 percent) of Spanish-speaking students in vocational education courses was four percentage points lower that the mainstream passing rate (73 percent). The overall passing rate (89 percent) of Arabic-speaking program students was 16 percentage points higher than the mainstream passing rate while the overall passing rate (100 percent) for Greek-speaking program students was 27 percentage points higher.

Attendance

The average attendance rate for program students in each language group was significantly higher than the mainstream attendance rate.

The average attendance (86.4 percent) for Spanish-speaking students was 12.9 percentage points higher than the mainstream attendance rate (73.4 percent). The average attendance rate (89.9 percent) for Arabic-speaking students was 16.5 percentage points higher than the mainstream attendance rate. The average attendance rate (93.9 percent) for Greek-speaking students was 20.4 percentage points higher than the mainstream attendance rate. All of these differences were statistically significant.

VI. CONCLUSIONS AND RECOMMENDATIONS

The staff of Project ELITES has continued working in the same direction begun in 1980-81. Other than the staffing changes which occurred when the project director retired in February 1982, the program has substantially remained the same as in its first year of operation. As such, some of the recommendations and observations made in the evaluation of 1980-81 are reiterated in this section as well as throughout the report.

One of the major strengths of the program continues to be the success it has with students of limited proficiency in English. These students are highly motivated, and as a result benefit from being placed in mainstream classes even when their knowledge of English is still partial.

For students who lack basic skills in their native language, the low literacy instructional sequence is adequate with regard to content, but present classroom organization does not seem to facilitate individualized approaches to address their varied problems.

Of the three language groups, the Greek students appear the least resistant to using English. The bilingual teachers of these students tend to introduce English vocabulary related to the content area and make use of English during part of the class period. The bilingual classes for the Spanish-speaking students, who are believed to be the most resistant to using English, are conducted almost exclusively in Spanish. Although the flexible approach to the use of the native language and English is likely to increase student participation in class, given

the linguistic needs of these students, the program might consider a policy of having lessons introduce English gradually.

Last year's report pointed out that, when compared to the size of classes for the other language groups, and for the school in general, the Spanish bilingual classes were very large. The same situation was observed to exist this year. The E.S.L. classes (as reported in the average register data) also appear to be too large to provide individualized instruction as well as intensive practice in speaking skills.

The large size of the classes could, to some extent, be compensated for by assigning the paraprofessionals to assist the bilingual and E.S.L. teachers. A reorganization of this type in the instructional component would be particularly advantageous to the low literacy classes.

During interviews with the resource teachers, the teachers described their background in bilingual education, their responsibilities, and general impressions about the program. They also offered the following suggestions on how the program might be strengthened:

--by expanding the career and occupational instructional component to include a wider selection of courses;

--by increasing the number of courses offered bilingually beyond those mandated for a high school diploma; and

--by making more efforts to purchase commercially-produced materials, particularly in Greek and Arabic.

The additional recommendations outlined below are made to suggest possible changes for program improvement.

Administration

A greater coordination of services might be achieved by holding meetings with the resource and tax-levy teachers (bilingual and E.S.L.) and paraprofessionals to develop program plans, periodically review progress being made to meet goals, and to jointly plan proposals for E.S.E.A. Title VII and other external funding sources.

Arabic Students

Since there are no bilingual subject-area courses for Arabic students other than the pull-out instructional program, attempts should be made to group these students together in selected mainstream classes. Otherwise these students will continue to be dispersed throughout the school and will not be able to develop the same sense of group cohesion that has been possible and positive for the Hispanic and Greek students.

Language Policy

No clear policy governs language use for instruction in the content areas taught bilingually. The program might consider developing a policy delineating the amount of time the native language and English should be used in the classroom. It is recommended that bilingual and E.S.L. teachers jointly plan appropriate techniques of introducing English within the content areas, and the use of subject-area topics to teach E.S.L.

Native-Language Instruction

Native-language instruction is of particular importance for students who have poor reading and writing skills. However, students in need of developmental instruction have diverse needs. The present classroom

organization does not lend itself to individualized instruction. A self-paced skills mastery curriculum might be more appropriate for these students instead of the whole class instruction that is currently being used. The staff is encouraged to explore programs of this type, which are available from commercial publishers in Spanish.

English-Language Instruction

English reading skills instruction would also benefit from being more individualized. Commercial materials that are prepared for small group instruction are available and could be used to supplement the LADO series presently used. Further, given the high number of students in E.S.L. classes, consideration should be given to increasing the number of classes offered to obtain a teacher-student ratio that is more conducive to individualized instruction if that is possible.

Instructional Sequences

The three instructional sequences seem to be implemented differentially. The gifted sequence was observed to be the most fully implemented, while the career-occupational instructional sequence needs to be more clearly defined. Although the proposal states that this component will be organized according to career clusters, these are not easily identifiable when looking at the whole program. The program is urged to develop more career-oriented classes in addition to the existing ones.

If offering more classes is not within the present capability of the program, consideration should be given to offering short workshops or seminars through invited bilingual speakers. A program of sessions

conducted by professionals in a variety of occupations who are also speakers of the students' languages would strengthen the career component and would provide positive role models for the students as well. Career awareness/orientation lessons could also be developed as units in English, E.S.L., or native language classes to supplement the course offerings.

Basic skills courses for students placed in the low literacy component seem to need some reorganization in order to achieve the program's intent of individualizing instruction. To do this, the program teachers might implement a classroom management system that allows for small-group instruction within the classroom. A class with 20 to 30 students could be subdivided into at least three groups, use materials that are skills-based, allow for student self-pacing and independent work, and use paraprofessional assistants to work with the classroom teachers.

Curriculum Development

It possible, the program might consider having professionally duplicated and bound, those materials which have been translated into the native language of the students. Mimeographed materials that are stapled and lack covers may be judged by the students and their parents to be inferior to the commercial textbooks available to mainstream students.

The resource teachers, with the assistance of the program director, may be encouraged to examine commercial programs intended for individualized instruction in the areas of communication and computation basic skills development. Programs of this kind might be purchased for use in the classrooms and also could serve as models from which to adapt or develop materials in the students' native languages, particularly in Arabic.

Supportive Services

If the coordinator of educational guidance continues to function in the capacity of program director, it would be most helpful to have an additional person, preferably with experience in counseling techniques that extend beyond those used in educational guidance, to provide guidance and counseling services. This person, ideally, would be responsible for offering individual and group counseling sessions geared to students' needs, organizing programs and providing information on career and occupational choices, and facilitating the college application process for college bound-students.

Additionally, it is strongly recommended that counseling services be offered on a more formal basis in a private space. Optimally, a separate room would be assigned to the person who has counseling responsibilities. (At present, such activities take place in the office of the program director.)

Staff Development

The staff has participated for two consecutive years in workshops on individualization of instruction, but it appears that there is still a need to further implement individualized approaches in the classroom.

It is suggested that the program director, if freed from the guidance responsibilities he now has, dedicate part of this time to plan a staff development program based on the instructional objectives of the bilingual program and on the particular needs of the resource teachers, the bilingual content-area teachers, the E.S.L. teachers, and the paraprofessionals.

The program is encouraged to make efforts, when planning staff development activities, to identify persons within and outside of the school who have expertise in particular areas and could be invited to conduct training sessions. Exposing the staff to persons from other schools, colleges, and community agencies could be a source of stimulation for new ideas and innovative practices. Encouraging school staff members to share their expertise could be a positive experience for all.

Documentation of Program Activities

It is recommended that information on program activities such as field trips, agendas for in-service workshops, college applications processed, evaluations of the apprenticeship placements, and other related areas be maintained so that they may be easily retrieved to document program activities.

A well-structured and thorough system to document program activities is particularly crucial for a program that is as complex in instructional organization and diversity of language groups served as Project ELITES. Without a system of data collection, documentation by language groups, by instructional components, and by grades is difficult to make. As a result, important program achievements may be overlooked.

Student Outcome Information

The results of student achievement on the CREST as reported are very difficult to interpret. The gains for students who were pre- and post-tested at the same level were unusually low and the gains for students who were pre- and post-tested at different levels were unusually high. The unusually high gains registered by the latter students are the result

of the algorithm used to calculate gains. When students are post-tested at a higher test level, it is assumed that they have mastered all of the objectives at the lower level. This results in spuriously high gains. For example, a student with a pre-test score of 10 objectives mastered at Level I and post-test score of 10 objectives mastered at Level II is given credit for mastering all of the 25 objectives at Level I.

It is highly recommended that students be pre- and post-tested each semester at the same test level. This testing procedure would facilitate interpretations of results by group as well as across similar groups. Comparisons with other bilingual students receiving Title I E.S.L. instruction in New York City would also be possible.

Students' oral language proficiency measured by the Scale for Rating Pupil's Ability to Speak English indicates that students who have lower pre-test ratings are able to show more improvement than those who have high pre-test ratings. It should be noted that students whose pre-test ratings were at the upper end of the scale ("B" in comprehension and "2" in speaking) could not possibly meet the program objective for the Gifted Component students: improvement of two levels on the scale. Therefore, it is recommended that objectives be modified considering the instruments' potential for measuring growth.

Finally, it is recommended that efforts be made to secure the data necessary in order to assess all aspects included in the program's objectives.